Just IT

B2W group

Apprenticeships | Training | Recruitment

Data Technician

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Course Date: 03/03/2025

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Day 1: Task 1

Please complete the below boxes on commons laws and regulations that must be followed when working with customers data, use the below bulleted list to support your answers.

- What is it
- Why is it important
- Provide a real-world example of how you can follow it
- How does it impact working with data
- What could happen if you breached it

Data Protection Act	**What is it?** The Data Protection Act is a law that regulates how personal data is collected, stored, and processed to protect individuals' privacy. **Why is it important?** It ensures that personal information is handled securely, lawfully, and fairly, preventing misuse and breaches. **Real-world example:** A company encrypting customer data and restricting access to authorized personnel only to comply with the Act. **Impact on working with data:** Organizations must implement security measures, obtain consent for data use, and ensure transparency in data processing. **What could happen if you breached it:** Fines, legal action, reputational damage, and loss of customer trust.
GDPR	**What is it?** The General Data Protection Regulation (GDPR) is an EU law that governs how personal data is collected, processed, and protected. **Why is it important?** It strengthens data privacy rights, ensures transparency, and holds organizations accountable for data protection. **Real-world example:** A company obtaining explicit consent before collecting customer data and allowing users to request data deletion. **Impact on working with data:** Businesses must implement strict security measures, provide clear privacy policies, and allow individuals control over their data. **What could happen if you breached it:** Heavy fines, legal penalties, reputational damage, and potential loss of business.

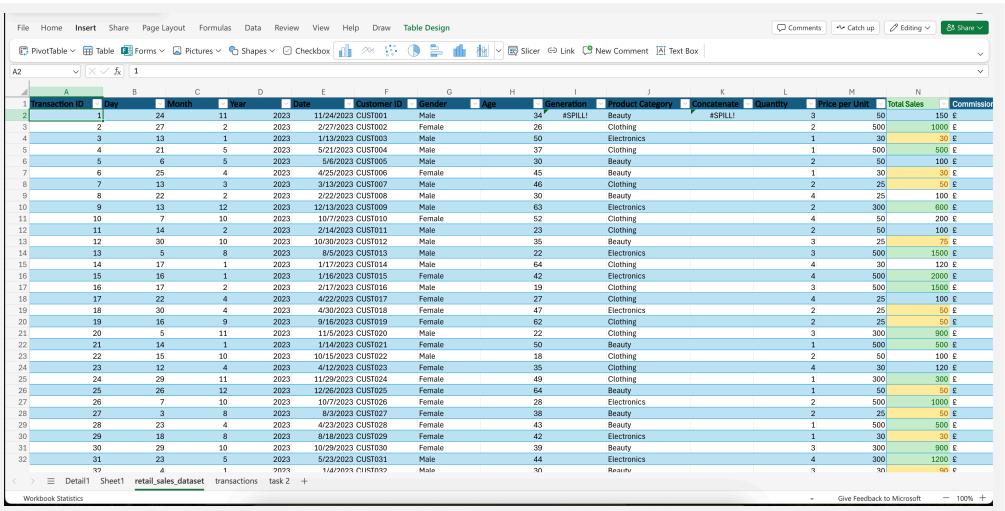
Freedom of Information Act	**What is it?** The Freedom of Information Act (FOIA) is a law that gives the public the right to access information held by public authorities. **Why is it important?** It promotes transparency, accountability, and public trust in government and public sector organisations. **Real-world example:** A journalist requesting government spending records to investigate how public funds are used. **Impact on working with data:** Public organisations must maintain accurate records and respond to information requests within legal timeframes. **What could happen if you breached it:** Legal action, fines, reputational damage, and loss of public trust.
Computer Misuse Act	**What is it?** The Computer Misuse Act is a law that protects computer systems from unauthorised access, hacking, and cybercrimes. **Why is it important?** It helps prevent cyberattacks, data theft, and malicious activities, ensuring the security of digital systems. **Real-world example:** A company implementing strong passwords and access controls to prevent unauthorised entry into its systems. **Impact on working with data:** Employees must follow cybersecurity policies, avoid unauthorised access, and use data responsibly. **What could happen if you breached it:** Criminal charges, fines, imprisonment, job loss, and reputational damage.

Day 2: Task 1

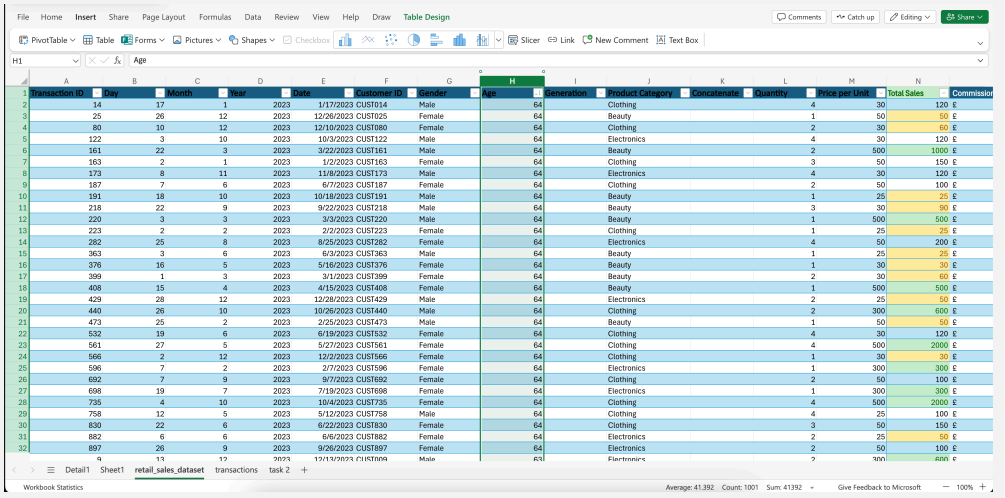
Please research and complete the following tasks within the retail-sales_dataset.xlsx document, paste a print screen into the provided boxes below:

1. In the sheet 'retail_sales_dataset' add all available data between columns **A – H** into a 'table'
2. Using the 'filter' function, filter 'Age' to 'largest to smallest'
3. Using the 'SUM' function, show me the commission total in cell '**P10'**
4. Using the 'AVERAGE' function, show me the average commission in cell **'P11'**

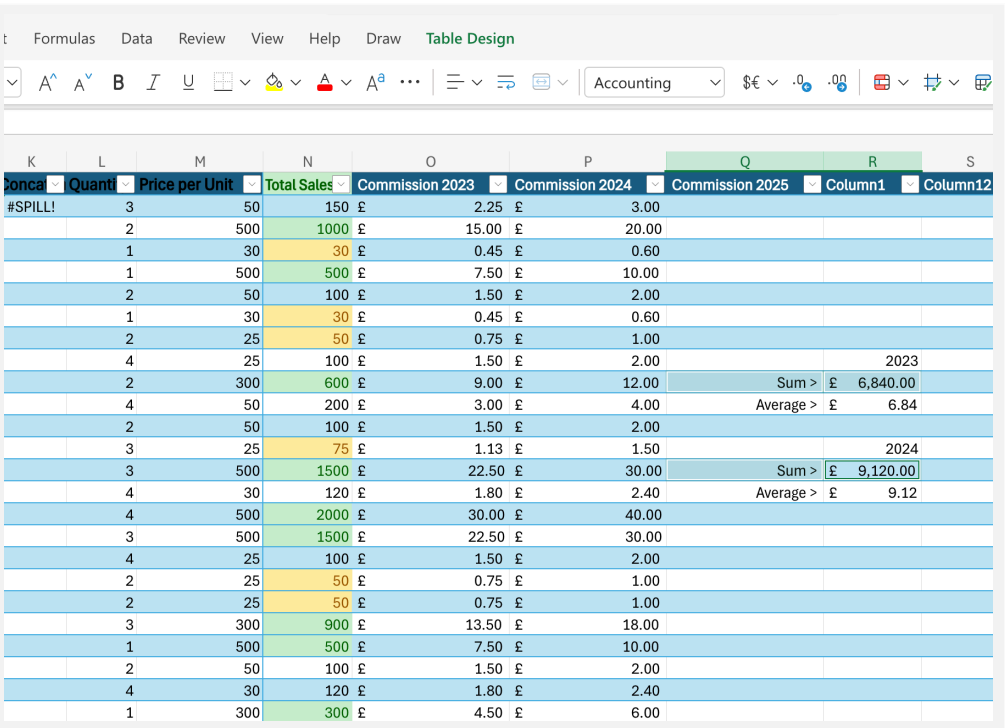
Print screen 1



Print screen 2



Print screen 3

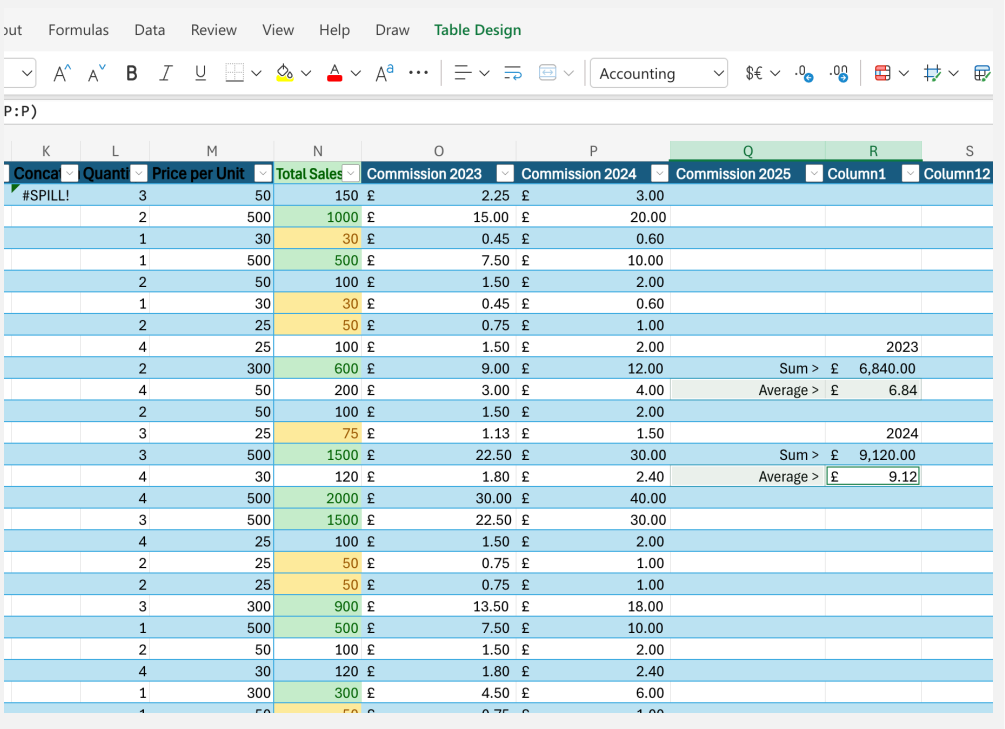


Formulas Data Review View Help Draw Table Design

Accounting

K	L	M	N	O	P	Q	R	S
Concat	Quanti	Price per Unit	Total Sales	Commission 2023	Commission 2024	Commission 2025	Column1	Column12
#SPILL!	3	50	150	£ 2.25	£ 3.00			
	2	500	1000	£ 15.00	£ 20.00			
	1	30	30	£ 0.45	£ 0.60			
	1	500	500	£ 7.50	£ 10.00			
	2	50	100	£ 1.50	£ 2.00			
	1	30	30	£ 0.45	£ 0.60			
	2	25	50	£ 0.75	£ 1.00			
	4	25	100	£ 1.50	£ 2.00		2023	
	2	300	600	£ 9.00	£ 12.00	Sum >	£ 6,840.00	
	4	50	200	£ 3.00	£ 4.00	Average >	£ 6.84	
	2	50	100	£ 1.50	£ 2.00			
	3	25	75	£ 1.13	£ 1.50		2024	
	3	500	1500	£ 22.50	£ 30.00	Sum >	£ 9,120.00	
	4	30	120	£ 1.80	£ 2.40	Average >	£ 9.12	
	4	500	2000	£ 30.00	£ 40.00			
	3	500	1500	£ 22.50	£ 30.00			
	4	25	100	£ 1.50	£ 2.00			
	2	25	50	£ 0.75	£ 1.00			
	2	25	50	£ 0.75	£ 1.00			
	3	300	900	£ 13.50	£ 18.00			
	1	500	500	£ 7.50	£ 10.00			
	2	50	100	£ 1.50	£ 2.00			
	4	30	120	£ 1.80	£ 2.40			
	1	300	300	£ 4.50	£ 6.00			

Print screen 4



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	2	50	100	£ 1.50	£ 2.00			
	4	30	120	£ 1.80	£ 2.40			
	1	300	300	£ 4.50	£ 6.00			

Day 2: Task 2

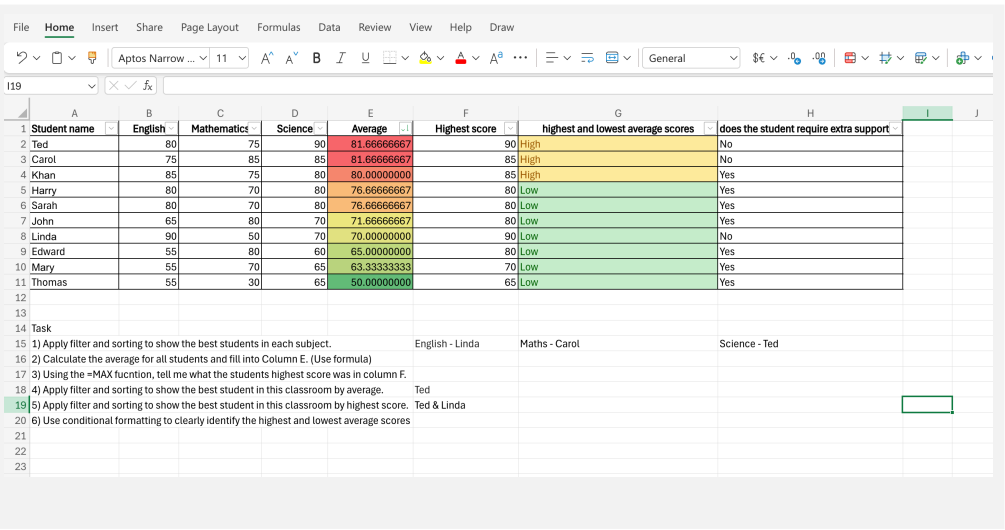
Please research and complete the following tasks within the retail-sales_dataset.xlsx document in Task 2 worksheet, paste print screens into the provided box below:

Student name	English	Mathematic	Science	Average	Highest score
Carol	75	85	85		
Ted	80	75	90		
Khan	85	75	80		
Harry	80	70	80		
Sarah	80	70	80		
John	65	80	70		
Linda	90	50	70		
Edward	55	80	60		
Mary	55	70	65		
Thomas	55	30	65		

Task

1) Apply filter and sorting to show the best students in each subject.
2) Calculate the average for all students and fill into Column E. (Use formula)
3) Using the =MAX fucntion, tell me what the students highest score was in column F.
4) Apply filter and sorting to show the best student in this classroom by average.
5) Apply filter and sorting to show the best student in this classroom by highest score.
6) Use conditional formatting to clearly identify the highest and lowest average scores

Print screen 1



	A	B	C	D	E	F	G	H	I	J
1	Student name	English	Mathematics	Science	Average	Highest score	highest and lowest average scores	does the student require extra support		
2	Ted	80	75	90	81.66666667	90	High	No		
3	Carol	75	85	85	81.66666667	85	High	No		
4	Khan	85	75	80	80.00000000	85	High	Yes		
5	Harry	80	70	80	76.66666667	80	Low	Yes		
6	Sarah	80	70	80	76.66666667	80	Low	Yes		
7	John	65	80	70	71.66666667	80	Low	Yes		
8	Linda	90	50	70	70.00000000	90	Low	No		
9	Edward	55	80	60	65.00000000	80	Low	Yes		
10	Mary	55	70	65	63.33333333	70	Low	Yes		
11	Thomas	55	30	65	50.00000000	65	Low	Yes		
12										
13										
14	Task									
15	1) Apply filter and sorting to show the best students in each subject.					English - Linda	Maths - Carol	Science - Ted		
16	2) Calculate the average for all students and fill into Column E. (Use formula)									
17	3) Using the =MAX fucntion, tell me what the students highest score was in column F.									
18	4) Apply filter and sorting to show the best student in this classroom by average.					Ted				
19	5) Apply filter and sorting to show the best student in this classroom by highest score.					Ted & Linda				
20	6) Use conditional formatting to clearly identify the highest and lowest average scores									
21										
22										
23										

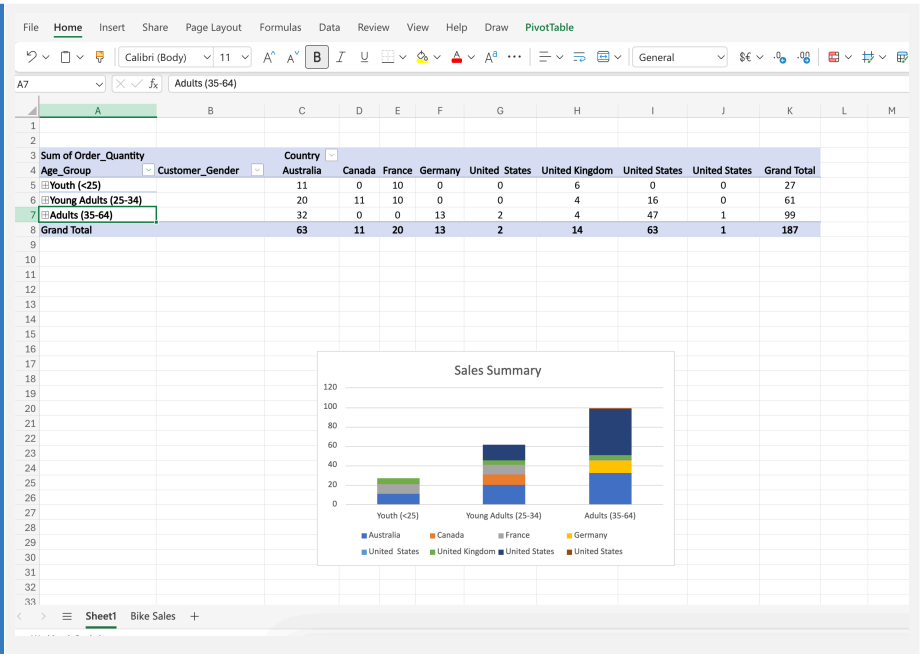
Day 3: Task 1

Please download the dataset 'Day_3_Task_1_Bike_Sales_Pivot_Lab.xlsx' from here.

The lab instructions can be found here. Do not worry if you do not complete the lab, just working with data and playing with the pivot table will be good experience.

Please paste your final pivot table below and complete the reflection questions:

Print screen 1



	A	B	C	D	E	F	G	H	I	J	K
3	Sum of Order_Quantity		Country								
4	Age_Group	Customer_Gender	Australia	Canada	France	Germany	United States	United Kingdom	United States	United States	Grand Total
5	Youth (<25)		11	0	10	0	0	6	0	0	27
6	Young Adults (25-34)		20	11	10	0	0	4	16	0	61
7	Adults (35-64)		32	0	0	13	2	4	47	1	99
8	Grand Total		63	11	20	13	2	14	63	1	187

In which markets do Germany have customers?	Mountain Bikes
What country has sales in all markets?	Australia, United Kingdom
What are the most profitable markets by country, age group, and gender?	Country - Australia Age Group - Adults (35-64) Gender - Female
Any other findings?	People in the United States don't cycle much.

Day 3: Task 2

The dataset below tracks the sales performance of different products in various counties in England. Please paste the dataset into a blank Excel workbook. Your task is to:

- **Create a Pivot Table** to summarise the data by county and product.
- **Use the SWITCH function** to categorise products based on their sales volume.

Dataset:

County	Product	Sales Volume
Yorkshire	Laptops	500
Yorkshire	Smartphones	200
Cornwall	Laptops	700
Cornwall	Printers	400
Lancashire	Smartphones	150
Lancashire	Laptops	600
Essex	Printers	800
Essex	Smartphones	300
Durham	Laptops	250
Durham	Printers	300
Greater Manchester	Smartphones	600
Greater Manchester	Laptops	400

Step 1: Create a Pivot Table

- Select the dataset (columns A to C).
- Insert a Pivot Table to summarise the data by **County** in the rows and **Products** in the columns. Use **Sales Volume** as the value to be summarised.

Step 2: Use the SWITCH Function

In a new column next to your data, use the SWITCH function to categorise products based on **Sales Volume** as follows:

- For sales greater than 600: **"High"**
- For sales between 300 and 600: **"Medium"**
- For sales less than 300: **"Low"**

SWITCH Function Example:

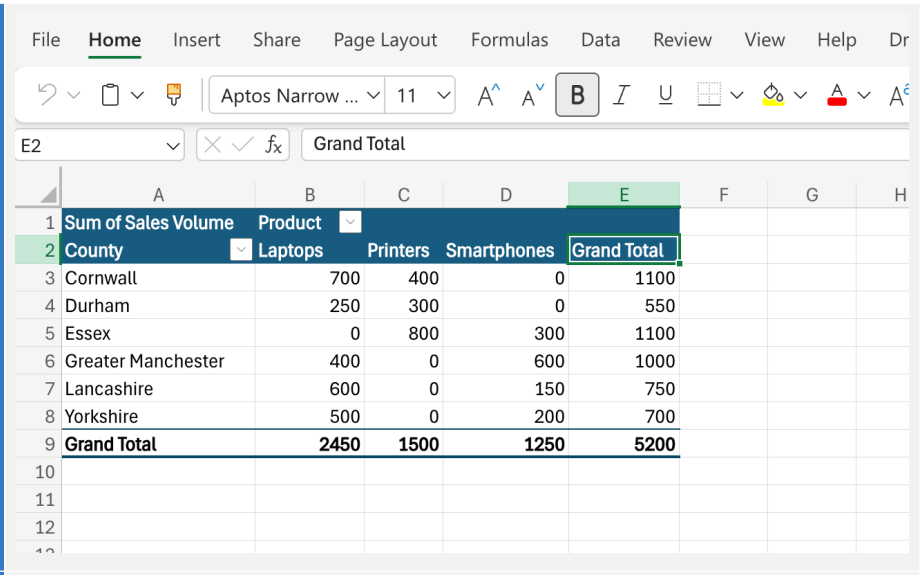
```
=SWITCH(TRUE, C2 > 600, "High", C2 >= 300, "Medium", "Low")
```

- Apply this formula to each row, and check if the products are categorised correctly.

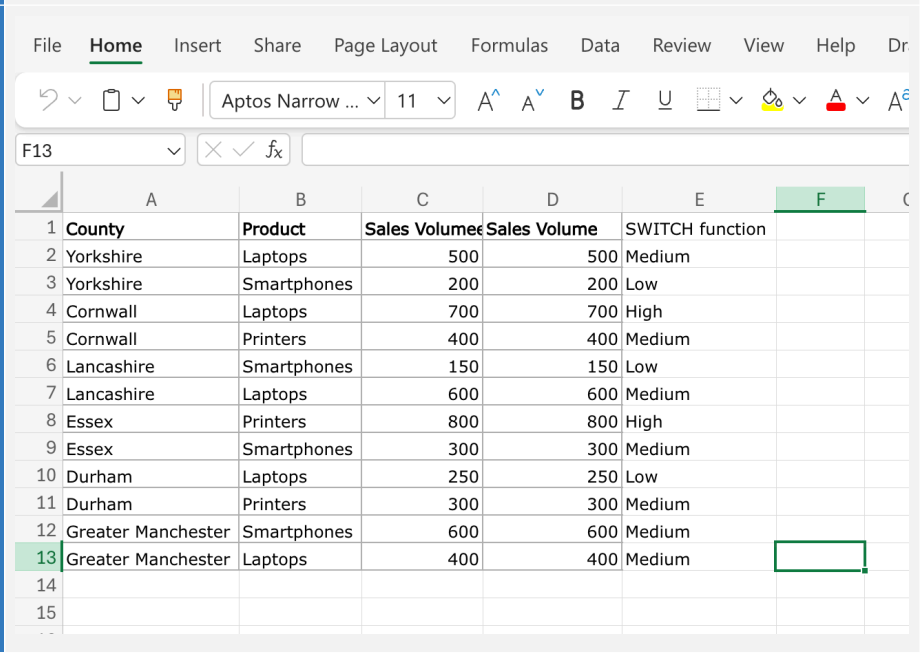
Submission:

- A completed Pivot Table summarising sales by county and product.
- A new column in the dataset categorising products by sales volume using the SWITCH function.
    - Please paste your completed work below

Print screen 1



Sum of Sales Volume	Product			
County	Laptops	Printers	Smartphones	Grand Total
Cornwall	700	400	0	1100
Durham	250	300	0	550
Essex	0	800	300	1100
Greater Manchester	400	0	600	1000
Lancashire	600	0	150	750
Yorkshire	500	0	200	700
Grand Total	**2450**	**1500**	**1250**	**5200**



County	Product	Sales Volume	Sales Volume	SWITCH function
Yorkshire	Laptops	500	500	Medium
Yorkshire	Smartphones	200	200	Low
Cornwall	Laptops	700	700	High
Cornwall	Printers	400	400	Medium
Lancashire	Smartphones	150	150	Low
Lancashire	Laptops	600	600	Medium
Essex	Printers	800	800	High
Essex	Smartphones	300	300	Medium
Durham	Laptops	250	250	Low
Durham	Printers	300	300	Medium
Greater Manchester	Smartphones	600	600	Medium
Greater Manchester	Laptops	400	400	Medium

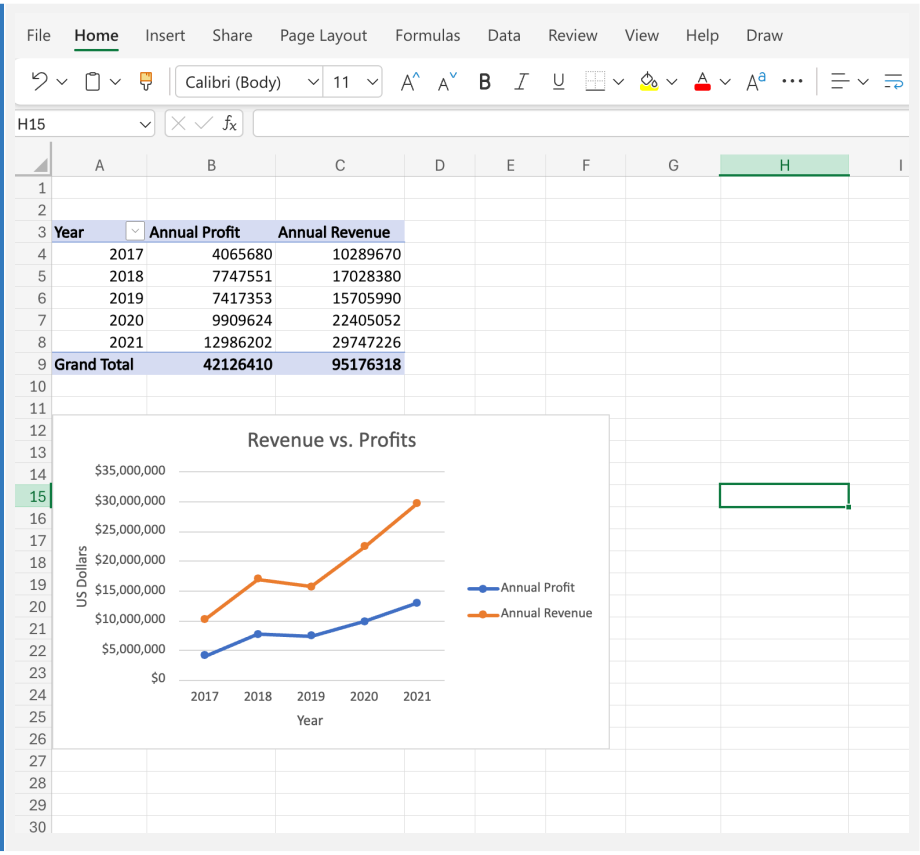
Day 3: Task 3

Please download the dataset 'Day_3_Task_3_Bike_Sales_Visualisations_Lab.xlsx' from here.

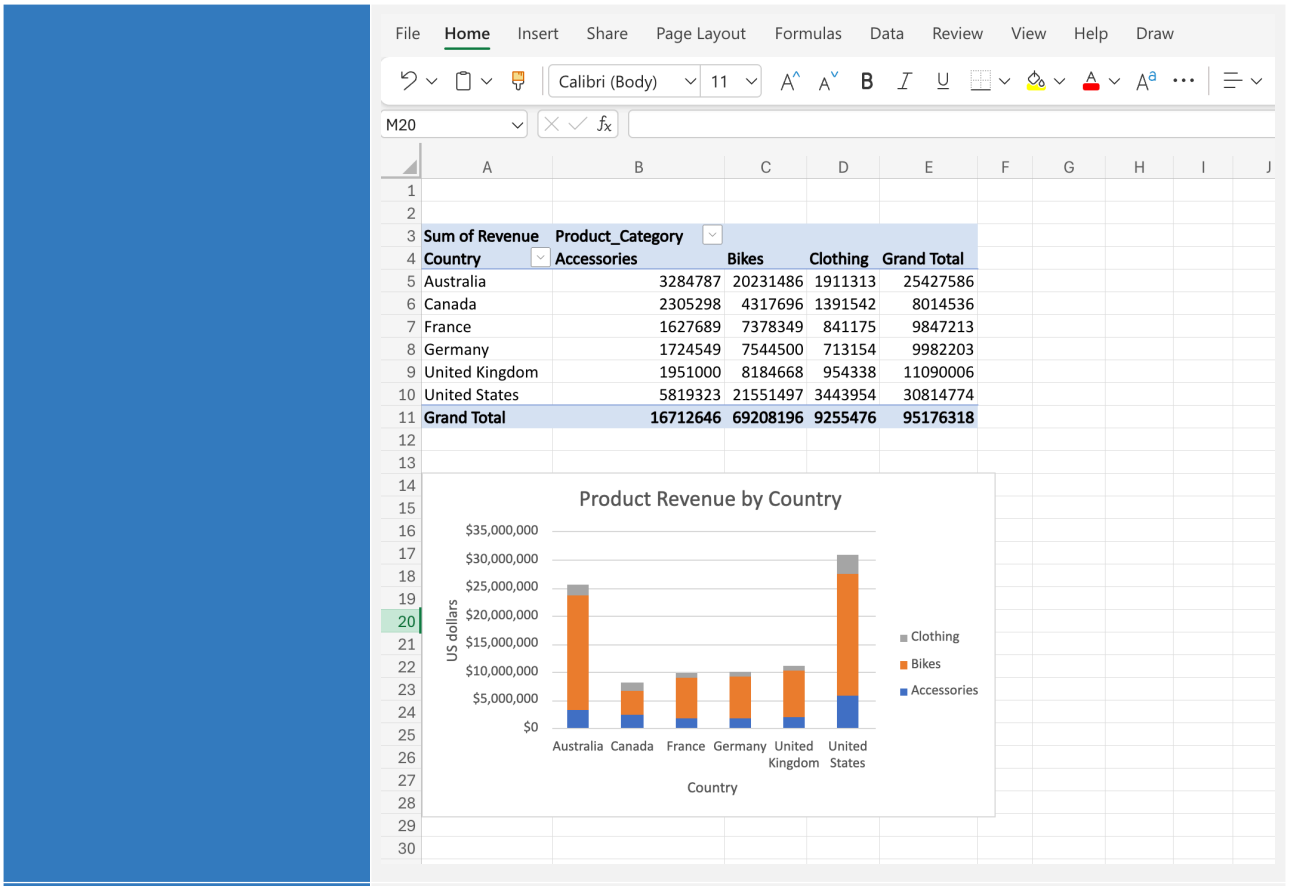
The lab instructions can be found here. Do not worry if you do not complete the lab, just working with data and playing with the charts will be good experience.

Please paste your results below:

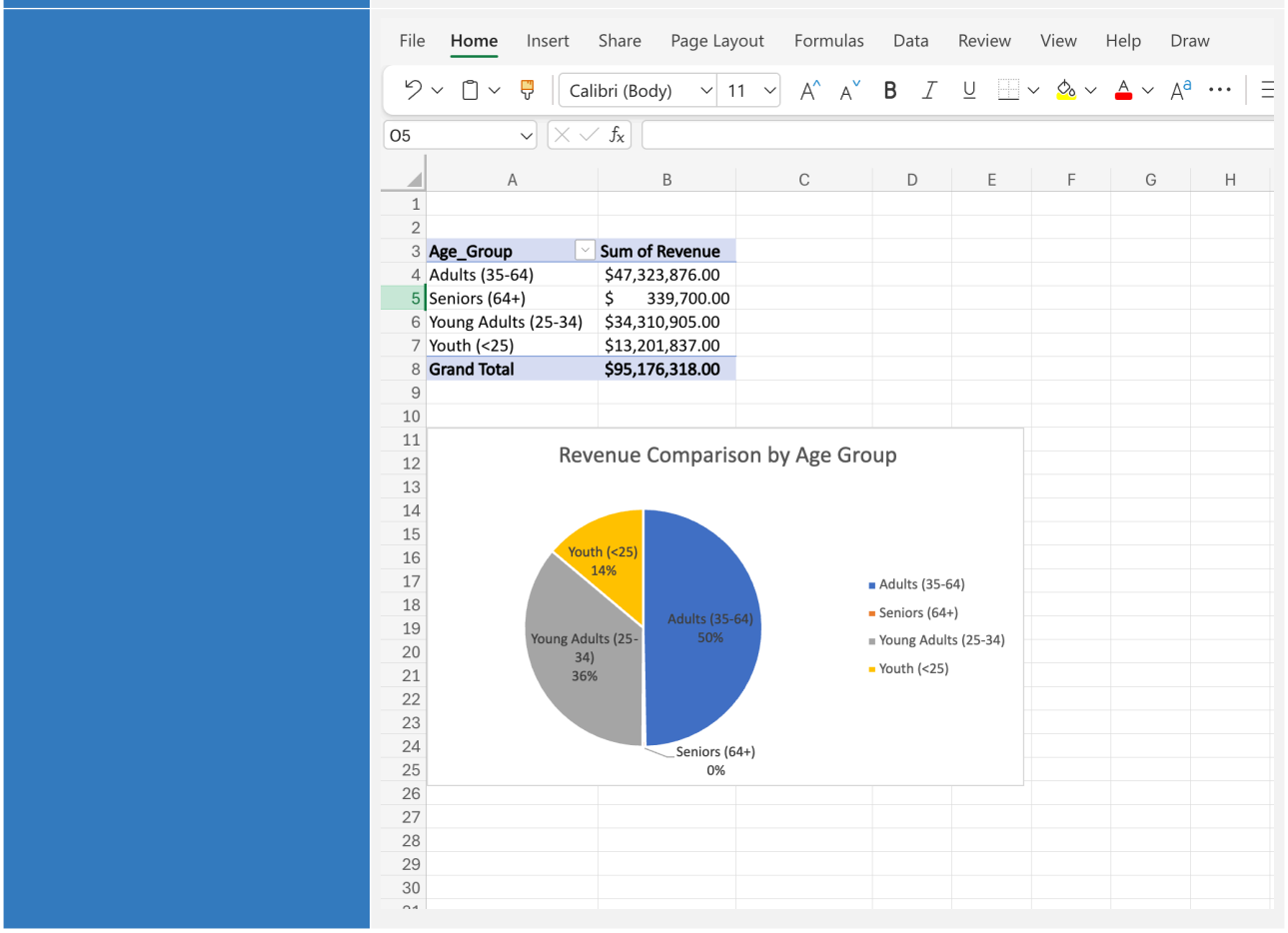
Print screen 1



Year	Annual Profit	Annual Revenue
2017	4065680	10289670
2018	7747551	17028380
2019	7417353	15705990
2020	9909624	22405052
2021	12986202	29747226
Grand Total	**42126410**	**95176318**



Sum of Revenue	Product_Category			
Country	Accessories	Bikes	Clothing	Grand Total
Australia	3284787	20231486	1911313	25427586
Canada	2305298	4317696	1391542	8014536
France	1627689	7378349	841175	9847213
Germany	1724549	7544500	713154	9982203
United Kingdom	1951000	8184668	954338	11090006
United States	5819323	21551497	3443954	30814774
Grand Total	**16712646**	**69208196**	**9255476**	**95176318**



Age_Group	Sum of Revenue
Adults (35-64)	$47,323,876.00
Seniors (64+)	$ 339,700.00
Young Adults (25-34)	$34,310,905.00
Youth (<25)	$13,201,837.00
Grand Total	**$95,176,318.00**

Course Notes

It is recommended to take notes from the course, use the space below to do so, or use the revision guide shared with the class:

We have included a range of additional links to further resources and information that you may find useful, these can be found within your revision guide.

END OF WORKBOOK

Please check through your work thoroughly before submitting and update the table of contents if required.

Please send your completed work booklet to your trainer by submitting in MS Teams Assignment page.